

CLAIMS

1. A compound capable of interstrand-crosslinking the double strands of DNA, as represented by the general formula (I):



(wherein, each B represents a chemical structure capable of recognizing the nucleotide sequence of DNA;

each A represents a chemical structure capable of binding to one of the bases of DNA;

L represents a linker capable of linking the chemical structures of A and B together;

X represents a spacer binding the component A-L-B.)

2. The compound according to claim 1, wherein the chemical structure capable of recognizing the nucleotide sequence of DNA is a chemical structure derived from pyrrole optionally having a substituent and/or imidazole optionally having a substituent.

3. The compound according to claim 1 or 2, wherein the chemical structure capable of binding to one of the bases of DNA is a chemical structure with cyclopropane ring.

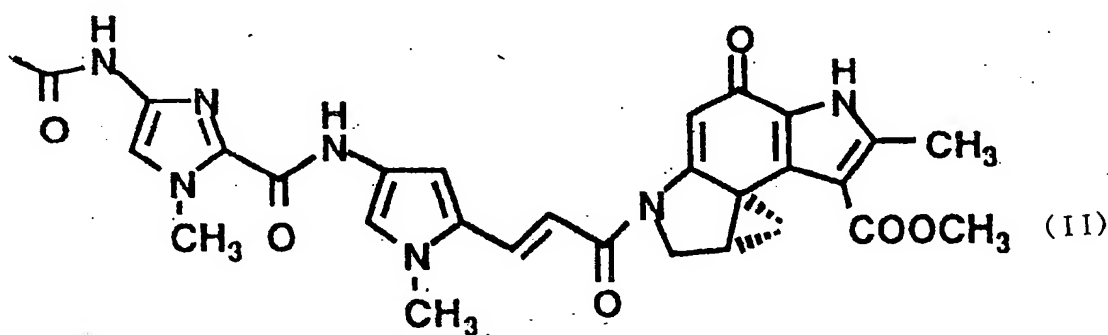
4. The compound according to any of claims 1 to 3,

wherein the linker L linking the chemical structures of A and B together has a chemical structure having vinyl group.

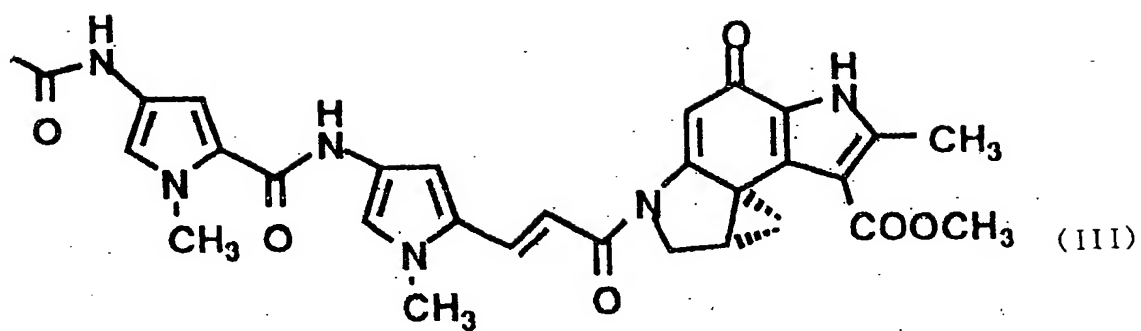
5. The compound according to any one of claims 1 to 4, wherein the spacer X binding the A-L-B component is carbonyl group or acyl group derived from organic dicarboxylic acid.

6. The compound according to claim 5, wherein the organic dicarboxylic acid is a saturated or unsaturated aliphatic dicarboxylic acid or an aromatic dicarboxylic acid.

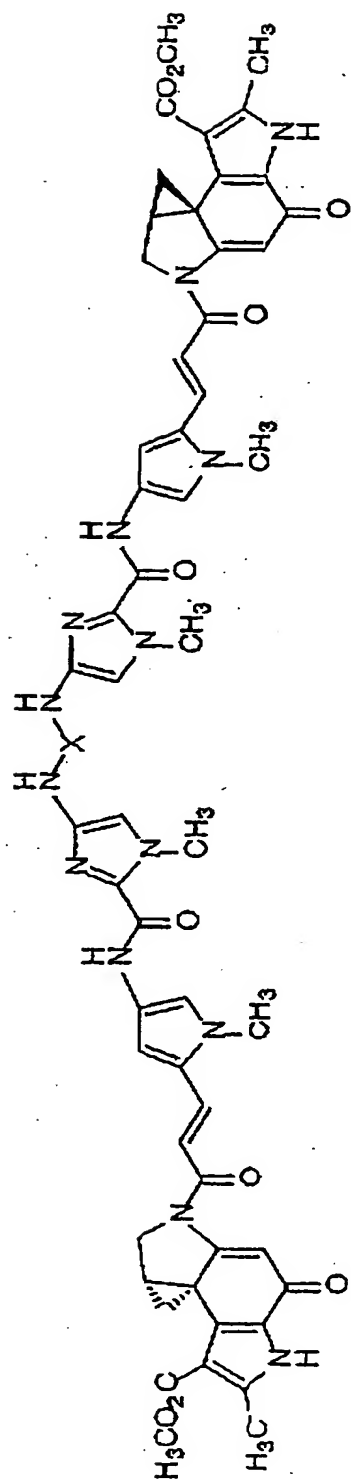
7. The compound according to any one of claims 1 to 6, wherein the A-L-B component of the compound represented by the general formula (I) is a compound represented by the following formula (II):



or by the following formula (III):



8. The compound according to claim 7, wherein the compound represented by the general formula (I) is a compound represented by the following formula (IV):



(IV)

(wherein, X represents a group represented by -CO- group, -CO-CH=CH-CO group, -CO-(CH₂)₄-CO- group, or -CO-(p-C₆H₄)-CO-group).

9. A method for interstrand-crosslinking a specific nucleotide sequence region of double-stranded DNA, using a compound according to any one of claims 1 to 8.

10. The method according to claim 9, wherein the interstrand-crosslinking of double-stranded DNA is progressed in the presence of a substance having a chemical structure capable of recognizing a nucleotide sequence of DNA.

11. The method according to claim 10, wherein the substance having a chemical structure capable of recognizing a nucleotide sequence of DNA is a substance represented as ImImPy.

12. The method according to any one of claims 9 to 11, wherein the specific nucleotide sequence is TGGC or GCCA or a complementary chain thereto.

13. An interstrand-crosslinking agent of double-stranded DNA, the interstrand-crosslinking agent comprising a compound according to any one of claims 1 to 8.

14. A pharmaceutical composition containing a compound according to any one of claims 1 to 8 and a pharmaceutically acceptable carrier.

15. A pharmaceutical composition according to claim 14, the pharmaceutical composition being a therapeutic agent of cancer.